

## **INTRODUCTION**

It has been more than 20 years since Marjorie Brown published *A Conceptual Scheme and Decision-Rules for the Selection and Organization of Home Economics Curriculum Content*. Her research and writings with coauthor, Beatrice Paolucci, challenged the relevance of the content of home economics curriculum to modern times. Brown described the discipline as a critical/practical science.

Brown (1978) advocated moving away from the traditional technical approach that taught students expert ways to perform household tasks to a critical-science approach based on helping students learn to think, reason, take action, and reflect on outcomes. Brown and Paloucci (1979) identified systems of family action as inherent components of the mission of the profession.

Following Brown's challenge to change, the name of the profession was changed from home economics to family and consumer sciences. The focus was on defining the discipline and its relationship to today's needs. Brown described family and consumer sciences as a problem-oriented field that draws on a knowledge base concerned with practical problems facing individuals and families every day. The knowledge base and essential skills of the discipline that the American Association of Family and Consumer Sciences suggested include the following:

- √ Consumer and resource management
- √ Housing and living environments
- √ Individual, child, and family development
- √ Nutrition and food
- √ Textiles and clothing

The decade of the '90s featured changes in classroom teaching to reflect the evolving changes in philosophy. Curriculum development was based primarily on three models. The foundations used were competency-based designs, concept-based designs, and process-based designs. Local curriculum designers and state curriculum planners adapted and revised these models to meet individual needs. State performance standards and national content standards for minimum levels of competence were developed to guide curriculum development and to provide accountability for student learning.

In 1996, Missouri family and consumer sciences educators began exploring a curriculum model that Ohio used. As a result, professional development focused on using critical thinking and process skills, curriculum guides developed, and new approaches fostered student learning. The result of these efforts in Missouri is a curriculum format that emphasizes critical-thinking skills, standards-based competencies, and process skills.

This *Implementation Handbook* contains information about designing an approved family and consumer sciences program, developing instruction and assessments that support the content, critical thinking, implementing this program, and evaluating the program to determine strategies for improvement.

## **Critical Thinking in Program Design and Implementation**

Numerous studies throughout the '80s concluded that most students lacked higher order thinking skills, and four years of college had little effect on improving these skills. Delisle (1997) interprets these findings as a clear indication that although students are taught the facts or basics, they are unable to broaden their thinking to understand and apply their knowledge. They may know some facts, but they don't know how to relate to the bigger picture of a job or how to transfer information from the classroom to the workplace.

The mission for family and consumer sciences education states that educators prepare individuals for work and family life. Work and family responsibilities are complex and dynamic. In order for individuals to prepare for work and family life in today's society, they will need a variety of skills for managing resources, communicating with others, solving practical problems, and taking on various leadership roles.

In the early 1900s, society shifted from an economy that relied on an agricultural base to one with an industrial base. Now the economy is changing to one based on information and service. It is vital that students are taught how to obtain credible information, characterize credible information, and understand the purpose for seeking information to ensure up-to-date facts and alternatives. Success in today's society requires

- The ability to find and use information that is constantly changing
- Flexibility in adapting to change
- Willingness to work in team settings
- Understanding and accepting cultural diversity

These social issues have many direct implications for families, including the following:

- Individuals will hold a number of jobs.
- Social arrangements are more fluid; people move from place to place and families are defined by various relationships.
- Individuals will face new issues related to technology and innovation.
- Social equity and interdependence with other countries will continue to increase.

To adequately prepare students for multiple life roles, family and consumer sciences education programs must address critical-thinking skills not only in the curriculum but also in the overall program philosophy, goals, and objectives.

## **Teaching Critical Thinking**

Students require directed instruction for learning the processes involved in thinking in order to reach the higher order levels of thinking such as analysis and evaluation. Just as a person will likely learn to walk if left alone, a person is likely to learn to think without assistance. However, to complete a marathon, most individuals must train and work up to the demands of this type of performance. This concept also applies to the skill of becoming a better problem solver. Students enrolled in family and consumer sciences courses that incorporate the process skills learn how to apply critical-thinking skills to solve perennial and daily practical problems.

With no formal training or instruction, a person can be a sibling, child, friend, parent, or spouse. However, to become a participating person in a nurturing relationship requires knowledge and skill of respectful communication, responsibility, conflict resolution, socialization, values, and other issues. Students need instruction to understand the work of the family and to build skills in using various strategies for solving practical, everyday problems. Successful relationships are not based on luck; they are based on understanding, effort, and commitment.

Thinking is a behavior that can be learned, modified, and measured. Higher order thinking skills can and should be taught and evaluated in the classroom. It is not enough to embed thinking skills in a lesson or activity. Students may demonstrate the skills without understanding why to use them or how to repeat them in similar situations. To be effective, higher order thinking skills must be included in learning objectives, classroom instruction, and assessments. Higher order thinking skills require students to analyze, compare, evaluate, critique, paraphrase, judge, interpret, predict, etc. Appendix A is an illustration based on Bloom's *Taxonomy of Educational Objectives* that describes some higher order thinking skills and projects or activities that challenge students to demonstrate mastery of these skills.

The following are some well-known researchers who believed thinking *must* be taught:

- Lev Vygotsky described the zone of proximal development (also known as windows of opportunity).
- Jean Piaget's work states that human beings actively construct meaning. (Two people in the same situation may perceive opposite meanings, such as one person perceiving a situation to be threatening whereas another person perceives it to be challenging.)
- John Dewey emphasized the difference between the process and the product of thinking (the thinking and the thought). Thinking is the act a student performs to obtain a product or thought.

## Using Standards-Based Competencies

Another component of the curriculum addresses the need for educators and administrators to be accountable for student learning. Accountability issues may be addressed by using state and national performance standards as benchmarks. These include the National Standards for Family and Consumer Sciences Education, All Aspects of the Industry, and the Secretary's Commission on Achieving Necessary Skills (SCANS). These standards are provided in the appendix.

The Missouri Show-Me Standards were published in 1996 to define what students should know and be able to do by the time they graduate. There are 40 knowledge standards divided among six academic disciplines and 33 performance standards organized into four goals. These goals address the students' ability to manage information, communicate effectively, solve problems, and act as responsible members of society. The four goals can also be described as process skills. There is a process that leads to effective communication, for example. Students can apply effective communications to any content.

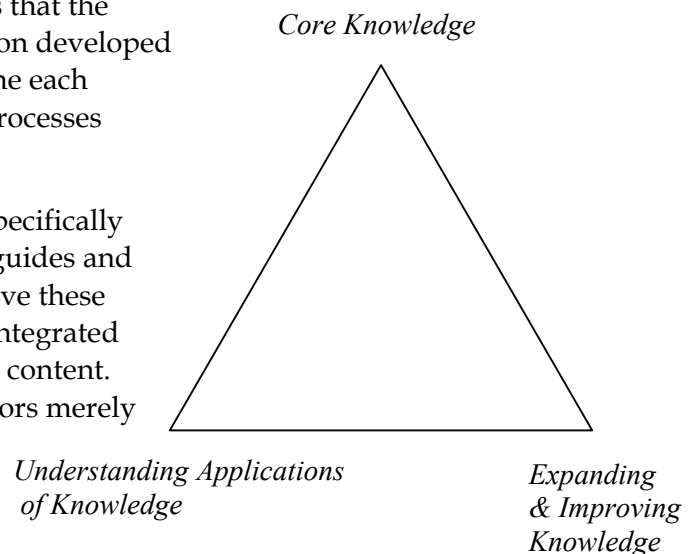
Section 4 of this *Implementation Handbook* contains course competencies aligned to state and national standards. These should be used as a starting point for developing local programs; however, each competency list must be tailored to meet the specific instructional goals and objectives of the district.

## Using Process Skills in the Curriculum

A great deal of research exists today in cognitive psychology that supports combining process skills with content knowledge to help students relate facts to their world. This is a guiding principle of constructivism.

The goals in the Show-Me Standards define four processes that are easily and appropriately related to family and consumer sciences content areas. The four processes are management, effective communication, problem solving, and leadership. These four processes are included in the family and consumer sciences curriculum resource guides that the Department of Elementary and Secondary Education developed since 1997. Competencies were identified that define each process skill. Scoring guides for evaluating these processes are included in Appendix C.

Each process skill should be taught and assessed specifically rather than embedded in the content. The scoring guides and competencies help students understand and improve these skills. Once the skills are understood, they can be integrated into learning activities and assessed along with the content. Research done in Ohio suggests that when instructors merely embedded the process skills in the content without teaching students what the skills were, the students were unable to recognize the process skills or transfer the skills to other areas.



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For example, students who were good at managing their time to complete a project did not recognize what skills were involved in time management. These same students were not necessarily efficient with their uses of time at work. Once the skills for time management were disclosed and assessed, students recognized how to transfer those skills to other aspects of their lives.

Sometimes teachers are so concerned with “covering the content” that they can lose sight of the process of learning. Imagine the three points of a triangle representing learning. At one point is the core knowledge, or essential content of the course. Another point represents understanding, such as knowing how and when to use the core knowledge (being able to apply the knowledge or demonstrate a skill). The third point of the triangle represents exploring new ways to improve or expand the core knowledge and its application. This point might include using existing knowledge in a new way or making existing knowledge better. This is the basis of invention, adaptation, and growth.

## **Linking Assessment and Instruction**

National statistics estimate that less than 10% of teacher-made classroom tests measure student performance above the level of simple recall. This is the lowest level of memorization; these tests do not assess or measure higher order thinking. Therefore, more than 90% of what teachers are testing students on is what the students read, remember, and recite.

The *Taxonomy of the Cognitive Domain* that Bloom and his colleagues presented more than 40 years ago separated thinking into six levels of complexity. They are (in order from least complex to most complex) knowledge, comprehension, application, analysis, synthesis, and evaluation.

Higher order thinking skills tend to fall in the levels of analysis, synthesis, and evaluation. Therefore, in order to “get inside the student’s head” to measure thinking, we must look at the appropriate behaviors, establish task analyses, define intermediate goals, and seek the “best practices” proven to exercise (train or condition) thinking. Critical thinking focuses on the higher order thinking skills needed to *think, reason, take action, and reflect*. These mental actions are more complex than memorization, recall, or even the application of information to a situation.

Critical-thinking skills are one piece of the curriculum. These skills are part of a philosophy that prepares students to become lifelong learners. To be most effective, these skills must be specifically taught, assessed, and combined with appropriate content. More information about how to write your own critical-thinking assessments is included in Section 4 – Program Implementation.

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